REMARKS

Claims 1-8 and 10, all the claims pending in the application, stand rejected. Applicants do not believe that any claim amendments are warranted at this time.

As a preliminary matter, Applicants note that the Examiner has withdrawn all prior rejections and has applied a new reference to Barrera (5,965,256) in rejecting all of the claims. The Examiner's position is based on the disclosed structure and composition of the pressure sensitive adhesive sheet in Barrera, and the asserted "inherent" parameters that the disclosed material would have in meeting the claim limitations. As explained subsequently, the Examiner's assumptions with regard to the structure and characteristics of the Barrera sheet, especially the IPN layer, are not correct.

35 U.S.C. §102/103 Rejections

Claims 1-8 and 10 are rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Barrera (5,965,256). This rejection is traversed for at least the following reasons.

In considering this new rejection, Applicants again wish to emphasize the basic features of the claimed invention in order to demonstrate that the invention clearly is different from the prior art.

Claim 1

The present invention is a pressure-sensitive adhesive sheet which comprises (1) a **composite film** consisting of a composition containing (a) urethane polymer and (b) a vinyl polymer, (2) a **first film** (a) comprising material different from that of the composite film and (b) laminated on one side of the composite film and (3) a pressure sensitive **adhesive layer** formed on the other side of the composite film. According to the claim, the **composite film is** between the first film and the adhesive layer.

The sheet is expressly defined to have a modulus of 9 N/mm^2 or more and 250 N/mm^2 or less. The claim specifies that the modulus is determined when an oblong piece of the pressure sensitive adhesive sheet with a width of 20 mm is bent at a radius of curvature of 3.0 mm, for example, according to the arrangement illustrated in Fig. 3.

The structure of the claimed **composite film** and the performance of the sheet made from such **composite film**, provides a clear distinction over the prior art, as subsequently demonstrated.

Claims 2-8 and 10

The dependent claims further specify the compositions of the **composite film**, including the use of an acrylic polymer (claim 3), a radical polymerizable monomer (claim 4), which is an acrylic monomer (claim 5). The composition of the composite film 2 is specifically disclosed at pages 12-19 from the present application. Claim 6 specifies that the composite film itself has a particular storage modulus at different temperatures, as disclosed at pages 21-22 of the specification. Claims 8 and 10 specify the thickness of the first film and second film, as disclosed at pages 34-35, where it also teaches that the thickness of the adhesive layer may be "optionally set".

Barrera

The reference is directed to a multi-layer protective film on a substrate, where the **substrate** may be a pressure sensitive adhesive (PSA) and where the film has an interpenetrating polymer network **(IPN) layer** and at least one **fluoro-containing polymer layer**, which serves as the exposed layer. The fluoro-containing polymer layer can be between the PSA layer and the IPN layer (see Abstract). An adhesive layer can also be provided on the IPN layer and covered with a release layer, as explained at col. 5, lines 57-61.

In considering the patentability of the claim with respect to Barrera, the features of the IPN layer as compared to the claimed composite film is significant.

IPN Layer Composition

Barrera does not specifically define the "IPN layer" in it's specification. Instead, in the Background portion of the patent, Barrera refers to two reference books, namely *Encyclopedia of Polymer Science and Engineering Vol. 8*; John Wiley & Sons, New York (1984) p. 279 and L.H. Sperling, "Interpenetrating Polymer Networks and Related Materials," Plenum Press, New York (1981)." Barrera specifically states that "interpenetrating polymer networks (IPNs), systems comprising two independent crosslinked polymer networks, are described." (see in column 1, line 65 to column 2, line 4 in Barrera's specification).

Notably, the term "IPN" is defined at the first paragraph of each reference book. (copies are enclosed). In short, an IPN is an intimate combination of two different cross-linked polymer networks (for example A and B), wherein the polymer A network is entangled in the polymer B network, but wherein there are no induced covalent bonds between the two polymers. This feature of IPN's as having no covalent bonds between different polymers is further supported by the accompanying reference, Daniel Klempner and Kurt C. Frisch, "POLYMER ALLOYS", Plenum Press, New York (1977) [page 97].

By contrast, in the present invention, the composite film is comprised by a composition containing a urethane polymer and a vinyl polymer as effective components. The urethane polymer does not have cross-linked structure. Only the vinyl polymer may have a cross-linked structure. Thus, the combination of a urethane polymer and vinyl polymer does not constitute two polymers, each having cross linked structures. Hence, the polymer structure of the claimed composite film does not meet the definition of IPN. Accordingly the structure as claimed cannot be met by the IPN structure of Barrera.

Sheet Properties

The Examiner expressly admits that the sheet properties are NOT disclosed in Barrera. The Examiner asserts that the sheet properties would be inherent. However, because the structures are significantly different, there is no basis for the Examiner asserting that the IPN-based film of Barrera would have the performance factors recited in the claims. Such feature could not be inherent, in light of the difference between the claimed composite layer and an IPN layer. That is, a film where two independent cross linked polymer networks are used would not have the same sheet properties where only one material has a cross linked structure.

Even if some of the physical properties of the present invention (not IPN) and the prior art (IPN) materials are assumed to be overlapping, only those films that satisfy all the physical properties simultaneously can realize the effects of the present invention reliably.

35 U.S.C. §103 Rejections

Claims 1-8 and 10 are rejected under 35 U.S.C. § 103(a) as obvious over Barrera (5,965,256). This rejection is traversed for at least the following reasons.

As to claim 1, Applicants respectfully submit that there is no teaching or suggestion for the combination as claimed, particularly with respect to the claimed physical parameters of the

sheet. In the absence of added teachings in the prior art, this is a clear basis for patentabilty.

Claim 2

The Examiner makes the same assertion about the recited parameters as he does for claim 1, namely that the film in Barrera is structurally and compositionally equivalent to the PSA sheet of the invention. Applicants have demonstrated that this is not the case, as would be understood by those skilled in the art. Thus, this claim would be patentable on any basis successfully asserted for claim 1.

Claim 3

The Examiner asserts that there is a teaching of vinyl polymer that is an acrylic polymer. Applicants would rely upon the foregoing arguments for patentability.

Claim 4

The Examiner asserts that the product by process limitations can be ignored and further asserts that the IPN layer of Barrera is formed of acrylate-urethane IPN (col. 1, lines 9-10) and the Barrera discloses curing to form the IPN layer at col. 12, lines 65-67.

Applicants respectfully traverse this observation by relying upon the foregoing arguments for patentability.

Claim 5

The Examiner does not comment on claim 5, which requires that a radical polymerizable monomer is an acrylic monomer. Nonetheless, Applicants respectfully rely upon their arguments with regard to the parent claim above.

Claims 6 and 7

The Examiner relies upon the inherent properties that would stem from the composition and structure of the disclosed multi-layer film. Applicants traverse this observation and rely upon the foregoing arguments for patentability.

Claims 8 and 10

The Examiner asserts that there is a teaching in Barrera of the claimed dimensions, namely that the first film has a thickness (t1) of 10 μm or more and 200 μm or less and the

composite film has a thickness (t2) of 10 μm or more and 300 μm or less, and wherein a ratio of the thicknesses (t1/t2) is t1/t2 = 0.1 to 10.

The teaching in Barrera at col. 20, line 66 of a fluoro layer that is knife coated onto a PSA substrate is cited to teach the first film dimension. There is no teaching as to whether this dimension changes after curing, which would be the time that the multi-layer film would be compared to the invention. The teachings of Barrera at col. 18, line 45 of an IPN film having a coated thickness of 0.1mm are cited as being relevant.

Applicants note that there is no teaching in Barrera of a composite film thickness or a ratio of thickness with respect to a first film and the composite film in the multi-layer assembly. Applicants respectfully submit that this deficiency precludes anticipation and precludes obviousness without reliance on hindsight. It is the combination that is being claimed and not simply different and unrelated components or layers. Applicants teach the interaction of the several layers and the impact each has in a combination that is set to achieve a desired performance goal. Only Applicants have described how this result is reached in the multi-layer structure defined by the claims.

Double Patenting

The Examiner provisionally rejects claims 1-8 and 10 on the ground of non-statutory obviousness-type double patenting as being unpatentable over copending application 11/524,177.

The Examiner accepted the Terminal Disclaimer submitted with the previous Office Action as a basis for overcoming the Double Patenting rejection based on USSN 11/358,256. In response to the Examiner's new Double Patenting rejection, Applicants are filing a second Terminal Disclaimer with respect to this rejection. Therefore, the Examiner is requested to withdraw this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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